Sub B'

1. (amended) A method for counting particles, comprising the steps of:

successively passing multiple particles through a particle sensing zone;

introducing a first signal into said particle sensing zone for a period of time;

measuring a second signal emanating from said particle sensing zone, said second signal being caused by modulation of said first signal by said particles passing through said particle sensing zone;

generating raw data using said second signal, said raw data correlating to a raw count of particles passing through said particle sensing zone, a wait time count and a size of each particle; and

processing said raw data by using a true average flight time and a true average wait time to obtain a corrected count of particles.

Sub B'

5. (amended) The method of claim 1, wherein a sample containing multiple particles of sizes varying by more than 50% is passed through said measuring particle sensing zone.

Sub B'

14. (amended) A method for counting particles, comprising the steps of:

successively passing multiple particles through a particle

sensing zone;

introducing a first signal into said particle sensing zone for a period of time;

measuring a second signal emanating from said particle sensing zone, said second signal being caused by modulation of said first signal by said particles passing through said particle sensing zone;

generating raw data using said second signal, said raw data correlating to a raw count of particles passing through said particle sensing zone, a wait time count and a size of each particle; and

performing coincidence correction by processing said row data by using a true average flight time.

Please add the following new claims:

--15. A method for determining the actual number of particles in a sample containing a plurality of particles of varying size; comprising the steps of:

I. passing the particles sequentially through a raw counting device which produces an analog voltage signal;

II. converting said analog voltage signal to a digital signal comprising a series of voltage pulses wherein each series has a duration corresponding to the raw flight-time that it takes for one or more particles to pass through the raw counting device and wherein the time between series is the raw wait-time;

III. converting them raw flight-time to the true flight-time;

IV. converting them raw wait-time to the true wait-time;

V. employing the true flight-time and the true wait-time to calculate the total true flight time and the total true wait-time to calculate the actual number of particles in a sample.--

B' Cont'd

--16. An apparatus for determining the actual number of particles in a sample containing a plurality of particles of varying size, said apparatus comprising:

E Cont'd

A. a particle counting device which produces a weak analog signal being a series of low voltage pulses wherein the duration of each single pulse is proportional to the time taken for one or more particle to pass through the counter;

B. a preamp which receives said weak analog signal from the particle counting device; amplifies the weak analog signal and produces a voltage signal (Vsig);

C. a comparator which receives said voltage signal (Vsig) from the preamp and compares said voltage signal (Vsig) with a predetermined voltage threshold (Vth) and produces a digital output signal being a series of digital pulses wherein the duration of each pulse corresponds to the amount of time that the voltage signal had a voltage greater than the voltage threshold;

D. a raw particle count generator which receives the digital output signal from the comparator and produces a raw

count of the number of particles;

E. an average raw count generator which receives the raw count of the number of particles from the raw particle count generator, and averages them thereby producing an average raw count;

F. a megahertz clock which produces a clock signal;

G. an AND gate which receives the clock signal from the megahertz clock and the digital output signal from the comparator and produces a digital output signal comprising a series of digital pulses interspersed with periods devoid of said digital pulses;

H. a raw wait-time counter which receives the digital output signal from the AND gate determines the raw wait-time between adjacent series of pulses thereby producing a time-time count;

I. a corrected average flight-time generator which receives information based on said voltage signal (Vsig) from the preamp and produces the corrected average flight-time;

J. an average period count generator which receives:

1. the average raw count from the average raw count generator;

2. the average time-time from the average time-time count generator; and

3. the corrected average flight-time from the corrected average flight-time generator;

and which employs the average raw count; the average time-

B' Cont.

time; and the corrected average flight-time to produce an average period count;

E Cont.

K. a coincidence-corrected count generator which receives the average period count from the average period count generator and which also receives an empirically determined correction factor; and then applies the empirically determined correction factor to the average period count, thereby determining the true count of the number of particles in the sample.--

Attached hereto is a marked-up version of the changes made to the application by this Amendment.